

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): Multi-channel network node for routing/switching data from a number of input ports to a number of output ports, wherein said data is buffered in a memory unit before being passed to a destined output port, wherein said multi-channel network node comprises

said memory unit organized as a number of physical memory queues, each queue being physically arranged so that it is physically assigned to an output port, and a switching unit for routing said data from the input port to said memory queue which is assigned to the destined output port.

2. (original): Multi-channel network node according to claim 1, wherein each of said memory queues comprises a number of coherent memory cells.

3. (original): Multi-channel network node according to claim 2, wherein the number of memory cells is resizable in order to re-distribute buffer capacity of the memory queues.

4. (original): Multi-channel network node according to claim 1, wherein a re-assembly unit is coupled with said input ports of the network node and said switching unit and

a segmentation unit are coupled with said memory unit and said output ports of the network node.

5. (original): Multi-channel network node according to claim 1, wherein each memory queue is assigned to a memory agent controlling the operation of the memory queue.

6. (original): Multi-channel network node according to claim 5, wherein said memory queues and said memory agents form said switching unit.

7. (previously presented): Multi-channel network node according to claim 5, wherein said memory queues and said memory agents operate asynchronous and in parallel.

8. (original): Multi-channel network node according to claim 1, wherein said switching unit is a switch matrix.

9. (original): Multi-channel network node according to claim 1, wherein said switching unit is provided by a processor controlled by software.

10. (original): Multi-channel network node according to claim 1, wherein input and output interfaces are assigned to the input and output ports, respectively.

11. (original): Multi-channel network node according to claim 1, wherein burst buffers are provided.

12. (previously presented) Multi-channel network node according to claim 11, wherein the output ports are output ports of the memory unit and are coupled with a switching unit.

13. (previously presented): Multi-channel network node according to claim 1, wherein the output ports are the output ports of the network node.

14. (currently amended): Method for routing/switching data from any input port to any of a number of output ports of a multi-channel network node, comprising the steps of:

receiving data from a data channel by a receiver unit;

queuing said data in a plurality of memory queues constituting a memory unit,

wherein each memory queue is physically arranged so that it is physically assigned to an output port; and

switching/routing the data from the memory queues to the output port the respective memory queue is assigned to.

15. (original): Method according to claim 14, wherein each memory queue allocates coherent memory cells.

16. (previously presented): Multi-channel routing/switching system comprising a network of interactive cascaded multi-channel network nodes as claimed in claim 1.